



2011 CARBON NEUTRAL ACTION REPORT

Executive Summary

The Coast Mountains Board of Education School District 82 and its 19 schools are working to become leaders in Northern B.C. in sustainable practices and environmental awareness. The district's commitment to promoting environmentally friendly practices and reducing our collective carbon footprint is reflected at all levels of the organization.

The Board of Education of Coast Mountains School District is proud to have supported many energy conservation initiatives over the past 10 years, which have contributed to moving us closer to carbon neutrality. These include district-wide lighting upgrades, which eliminated the use of both T12 lighting and incandescent lighting in our district, the implementation of direct digital controls for our heating systems and have moved forward with a program to support motion sensor lighting inside schools and daylight sensors for external lighting control.

Overview

2011 Greenhouse Gas Emissions and Offsets Applied

In 2011, the Coast Mountains Board of Education School District 82 generated a total of 3,082.60 tonnes of CO₂e. In order to become carbon neutral for 2011, our district has purchased and applied 3067.13 tonnes of emission offsets with a total value of \$86,324.00. As well, School District 82 overpaid by 2 tonnes for 2010 emission offsets.

Actions Taken to Reduce Greenhouse Gas Emissions in 2011

Coast Mountains Board of Education continues to promote environmental responsibility through the education system in all of its schools by providing both support and information to school principals, teachers and parent advisory committees throughout the district. Schools employ recycling programs, composting programs, and energy conservation programs within each site. The district will work to coordinate these efforts at a broader level in order to maximize the benefits and create a stronger consistency of program delivery between all schools.



Actions Taken to Reduce Greenhouse Gas Emissions in 2011 *(continued)*

The Coast Mountains Board of Education has continued to replace aging boilers in its schools and renovate/retrofit facilities as funding is available. The Board installed occupancy sensors to control lighting in two secondary schools and five elementary schools. We have 11 facilities in which we have replaced 32-watt lamps with 28-watt lamps. We have upgraded two of our schools with energy efficient windows, and have replaced older high-temperature boilers with condensing boilers in two of our facilities, which will significantly reduce our natural gas and propane heating consumption. This program is in partnership with the Ministry of Education.

There are currently many projects and initiatives that have been carried out in schools and classrooms throughout Coast Mountains School District 82 in 2011. These include, but are not limited to, recycling programs, anti-idling signage, walk to school initiatives, turn-it-off programs for lighting and computers, composting, creating a community garden, tree planting, and water conservation awareness. District schools also participate in a number of celebrations revolving around Earth Day.

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2012

The Coast Mountains Board of Education will continue to promote green teams, student-learning initiatives, and increase the educational presence on the sustainability committee to provide further support to our schools.

The school district will continue to upgrade its boiler plants, mechanical systems, control systems, and building envelopes to optimize its energy utilization.

The school district will be upgrading lighting controls in six facilities and will continue to convert buildings to the 28-watt lamps over the upcoming year. We have a boiler replacement initiative designed and ready to go, waiting funding from the recently announced K-12 Energy Efficiency Capital Program.

Nancy Wells
Superintendent of Schools & C.E.O.
Coast Mountains Board of Education School District 82

Coast Mountains Board of Education SD No. 82 - 2011 Carbon Neutral Action Report

Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)						
Vehicle fuel efficiency						
Replace vehicles with more fuel-efficient models	Ongoing/In Progress		Purchased 1 New Vehicle	continue program as funding becomes available	2003	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress		One tractor replace with smaller more fuel efficient model	replace tractor with large area mower when funding becomes available	2011	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency All fleet vehicles have a regular maintenance schedule	continue program	2003	No End Date (Continuous)
Behaviour change program						
Provide fleet driver training to reduce fuel use	In Development		none	arrange training for maintenance staff when funding is available	2012	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress		ongoing instruction to staff, provided signage to schools for program	Ongoing instruction to staff regarding department practice. Continue to provide support for school programs	2010	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress		Maintenance staff car pool between areas	continue practice where applicable	2010	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress		Schools continue to promote walk to school programs	continue practice	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Owned buildings						
Establish energy performance baseline for owned buildings	Ongoing/In Progress		continued to monitor utilities utilization in all facilities	continued to monitor utilities utilization in all facilities	2003	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress		Continue to use a percentage of our annual facility grant funding to fund energy retrofits on our facilities. Continue partnership with BC Hydro on lighting replacement and control program.	Continue boiler replacement program, window replacement program and lighting control program as funding becomes available	2003	No End Date (Continuous)
Retrofitting owned buildings						
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress		2 schools received new energy efficient condensing boiler packages.	continue program as funding becomes available - two schools are scheduled for energy efficient boiler replacements in the 2012/ 2013 school year	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress		13 buildings received lighting improvements. Reduced from 32watt to 28 watt tubes, occupancy lighting controls installed in 7 schools - 2 secondary schools underwent lighting redesign including removal of high wattage mercury lamps	continue lighting design and control program	2003	2014
Upgrade/adjust control systems during retrofits	Ongoing/In Progress		All schools DDC controls were upgraded to newer version this past year	continue to upgrade	2009	No End Date (Continuous)

Coast Mountains Board of Education SD No. 82 - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			insulation upgrade on area in secondary school, insulation upgrade included in all roofing projects, insulation upgrade in k - 12 school completed in 2011. Two schools received full window replacements. Windows were replaced in renovated area in one secondary school.	windows replaced in two schools planned for 2012/ 2013 school year	2010	No End Date (Continuous)
IT power management							
Implement server virtualization	Ongoing/In Progress			now standard operating practice. Virtualized where possible	continue practice	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	100	% of computers have auto-sleep settings applied	continue to ensure settings are active	continue program	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			continued program	continue program	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	95	% of devices have auto-sleep settings applied	continue practice	continue practice	2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	95	% of computers are ENERGY STAR rated	all computers purchased in 2011 are energy star rated	continue program	2008	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			all fridges purchased were energy star rated	continue program	2005	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			all appliances purchased are energy star rated	continue program	2010	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development			promote energy awareness through school principal	continue to promote	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			standard practice for security purposes	continue program	Started before 1995	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			promote energy awareness through school principal	continue program	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			Lighting occupancy sensors installed in 7 schools in 2011. Promote energy awareness through school principal. Heating controls on occupancy sensors	continue program	2011	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Monitor program and provide replacement stickers	continue program	2005	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			continued to replace shower heads as funding is available	continue program	2008	2014
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	In Development			evaluated costs implications	include as alternative in tender specifications	2012	2012

Coast Mountains Board of Education SD No. 82 - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Purchase 100% post-consumer recycled paper	In Development			evaluated costs implications	include as alternative in tender specifications	2012	2012
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	In Development	25	% of network printers or photocopiers are set to automatic double-sided	started to switch to double sided as schools buy in	bring forward for 2012	2012	No End Date (Continuous)
Electronic media in place of paper							
Post materials online that were previously printed	Ongoing/In Progress			district forms available online	moving towards cloud storage, using school websites to inform parents	2011	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress			all cupe staff receive electronic payroll notification, clerical staff on electronic time sheet system	continue to expand program where contracts allow.	2009	2014
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			staff has been encouraged to use electronic media	continue to promote electronic alternatives	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			re-use has been promoted in all schools for a number of years	continue to promote	2008	No End Date (Continuous)

Coast Mountains Board of Education SD No. 82 - 2011 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability

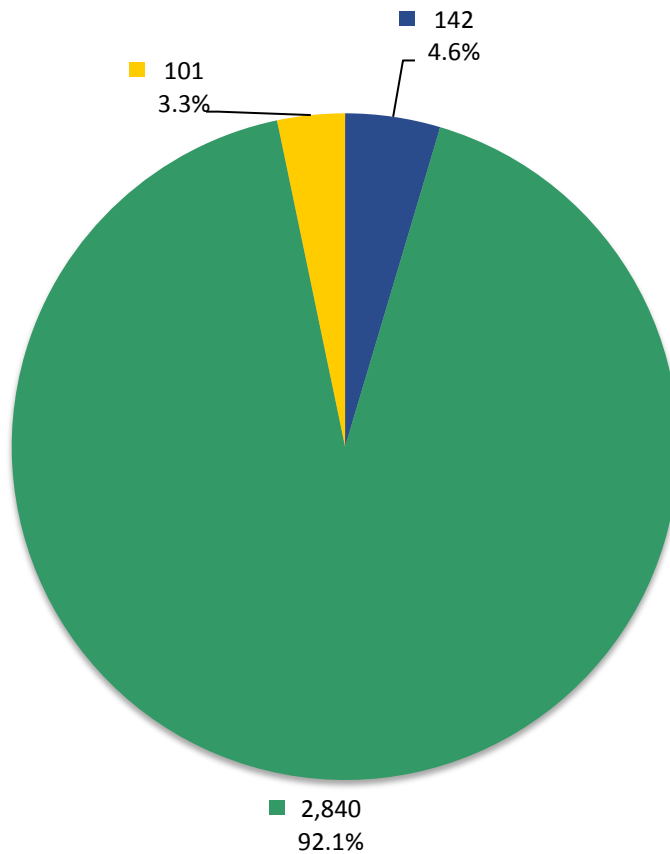
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel						
Virtual meeting technology						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress		continued to use elluminate and live meeting for delivery of education	continue and promote practice	2007	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress		all laptops purchased in 2011 have web cameras	continue to promote	2000	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress		using Video conference to deliver education in secondary schools	continue program	2009	No End Date (Continuous)
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress		continued program	continue program	2000	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		all site administrators who have the equipment are trained in its use. Using video conferencing to provide course in secondary school level.	Train staff who require access. Ongoing	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		use of webinars and online attendance continues to increase	continue to promote	2006	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		continue to promote	continue to promote	2007	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress		promoted site based green teams / shared web based green team items with schools	District Education Team to take lead in promoting green teams	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development		no funding available in budget due to declining enrolment. researched shared services with two other school districts.	continue to have as budget item for budget process. Continue to discuss sharing resources with other school districts	2010	No End Date (Continuous)
Awards/Recognition						
Establish a sustainability/green awards or recognition program	In Development		not able to fund in 2011	continue to have as a budget item for budget process		No End Date (Continuous)
Staff awareness/education						
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		continued to ensure all maintenance and custodial staff are aware of responsibilities. Student lights off program in place	continue to promote	2003	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress		green tips sent to all school principals for distribution	continue practice	2009	No End Date (Continuous)
Client/public awareness/education						

Coast Mountains Board of Education SD No. 82 - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Schools have continued to incorporate energy, material conservation and climate change into student studies	continue practice	2006	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Schools have continued to incorporate energy, material conservation and climate change into student studies	continue practice	1999	No End Date (Continuous)
Other Sustainability Actions						
Water conservation						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		continued to replace fixtures with water efficient models	continue program	2008	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress		continue practices	continue program	2008	No End Date (Continuous)
Waste reduction/diversion						
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress		recycling programs have historically been in place in all school facilities.	continue practice	Started before 1995	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		continue to reduce inventories and replace products with less hazardous products	continue practice	2000	No End Date (Continuous)
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		continue program	continue program	1999	No End Date (Continuous)
Building construction, renovation, and leasing						
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		Life cycle costs are an integral part of all project planning and has been part of the material and equipment selection process in all projects	continue practice	2000	No End Date (Continuous)
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		many of our schools and facilities have scent free practices in place	continue to support practices	2000	No End Date (Continuous)
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress		continue to support program	continue to support program	2008	No End Date (Continuous)

School District 82 - Coast Mountain Greenhouse Gas Emissions by Source for the 2011 Calendar Year (tCO₂e*)



Total Emissions: 3,083

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 12:41 PM)

Total offsets required: **3,067**. Total offset investment: **\$76,675**. Emissions which do not require offsets: **16** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.